ABSTRACT

Techniques for increased finger demodulation capability in a hardware efficient manner are disclosed. In one aspect, I and Q samples are shifted into a parallel-accessible shift register. A plurality of chip samples are accessed from the shift register and operated on in parallel to produce a multi-chip result for a channel each cycle. These multi-chip results can be accumulated and output to a symbol-rate processor on symbol boundaries. The scheduling of shift register access, computation, and accumulation can be scheduled such that the hardware is time-shared to support a large number of channels. In another aspect, time-tracking of a large number of channels can be accommodated through channel-specific indexing of the contents of the shift register file. These aspects, along with various others also presented, provide for hardware efficient chip rate processing capability for a large number of channels, with a high degree of flexibility in deployment of those channels.